claims prove too much: if you believe them, radio is a hemorrhaging service and the broadcast landscape should already be strewn with corpses. As shown below, nothing could be further from the truth.

If the agency is serious about becoming the "Federal Competition in Communications Commission,"[47] it should be competitively neutral as to particular technologies.[48] Broadcasters already "compete" with audio cassettes, CDs, DBS radio and cable radio, none of which apparently has thwarted the rapid increase in radio broadcasting. Similarly, CD Radio believes that satellite DARS and conventional radio will complement, not compete with, each other. But, to the extent satellite DARS might contest traditional radio for audience, this would be the decision of the listening public and a matter for the marketplace.

1. Radio Today Is Healthier than Ever

In its comments, CD Radio included the August 1994 study by InContext Inc. that reviewed the current radio market.[49] Radio, the study found, has never been healthier: in statistic after statistic, radio broadcasting is on the rise. For example, radio is still a popular

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[47] *See* CD Radio at 57-58.

[48] The Commission acknowledged as much in the *NPRM*. *See NPRM*, ¶ 11 ("The public interest in this regard is the provision of services of value to the listening public and includes the protection of competition, not competitors.").

[49] InContext Inc., Satellite Radio: Good for the U.S. Consumer, Good for U.S. Radio Good for U.S. Industry (Aug. 1994) (the Lilley study), included as Appendix A to CD Radio's Comments.

investment: the number of transactions has increased for several years in a row.[50] These have not been distress sales: the Lilley study showed that radio stations traded 11.1 times cash flow in 1993, higher even than during the late 1980s.[51] In addition, radio advertising revenue had grown five-fold since the mid 1970s, and radio's share of the total advertising pie also is on the rise.[52] The health of the radio industry cuts across both large markets and small markets.[53] Perhaps most importantly, the Lilley study demonstrated that radio's meteoric rise in revenue and listenership was not deflected in the slightest by the introduction of car cassette and CD players.[54] Overall, the Lilley study predicted that satellite DARS would lead not to a decline in revenues of traditional broadcast stations, merely at most to a worst-case possible 3.1 percent slowing of revenue growth by 2004.

Tellingly, *even though NAB has had access to the Lilley study for more than a year, its filing does not even attempt to rebut it.* With minor exceptions, the broadcasters act as if the record did not already contain documented evidence that satellite DARS will not harm the

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[50] Lilley study at 9.

[51] *Id.*

[52] *Id.* at 10-11.

[53] Small market revenues have risen 22 percent since 1987. *Id.* at 14.

[54] *Id.* at 16. Indeed, the Lilley study showed that a fundamental factor in the health of the radio industry is its inherent ability and agility to thrive in the face of new technology. *Id.* at 16-22.

vibrant radio broadcast industry. NAB and the broadcasters bear the burden of proof here,[55] and -- by not contesting the Lilley study -- they have failed to meet that burden.

CD Radio's comments also provided expert evidence of the continued prosperity of the radio industry since the publication of the *Lilley* study. For example, Gary Fries, Chairman of the Radio Advertising Board, noting that radio listenership had held steady notwithstanding the introduction of cassette and CD players in cars, concluded that radio's prosperity will last.[56] CD Radio also attached numerous articles to its comments showing that radio is healthier than ever, and years of continued growth are predicted notwithstanding the introduction of new technologies.[57] Indeed, the NAB's own President, Eddie Fritts, sums it up more eloquently than anyone:

> [Many are predicting a] plethora of new technologies will be the death knell of local stations. My friends, the death knell for radio has sounded before [and] radio has refused to answer that call. . . . As we provide the public with relevant programming, I predict America's love affair with radio will only be enhanced.[58]

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[55] 47 U.S.C. § 157 (1994).

[56] CD Radio at 69.

[57] *Id.* at Appendix D ("Ad spending will grow by a predicted 5.6% [between 1994 and 1999];" "radio is a very strong industry, doing very well economically;" "Radio stocks are up an average of 50%;" "there's nothing on the horizon to suggest anything but continued good growth for radio through the fourth quarter and into 1996.").

[58] DARS Grabs Attention of NAB Radio Show, Communication Daily at 4 (Sept. 11, 1995), *reprinted in* CD Radio, Appendix D.

The record to date thus establishes that radio is flourishing and is itself optimistic about the future.

This view is confirmed by other analyses newly supplied. The Malarkey-Taylor Associates' study shows the slow build-up required to establish satellite DARS in the marketplace, and the correspondingly delayed effect on traditional radio. That study predicts, in a worst case, that by the year 2007, DARS will have less than a 1 percent effect on traditional radio revenue and around 2 percent on station cash flow and profits, even in smaller markets.[59] A similar analysis, authored by Larry Darby, noted that if radio revenues increased at the 7 percent annual growth rate predicted in the *Veronis Suhler* report (as noted in CD Radio's opening round comments), by 2005, traditional radio would reap more than $21 billion in annual revenues. In the same time frame, satellite DARS revenues would be about $200 million, or approximately one percent of conventional radio.[60] Thus, the quantitative information on the record establishes beyond cavil that satellite DARS is no threat to the traditional radio powerhouse.

Even apart from reports, numbers, charts and studies, NAB's position simply makes no sense. Terrestrial radio *garnered* nearly $11 billion in revenue last year[61] and this year's

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[59] Malarkey-Taylor Associates, An Assessment of the Impact of satellite DARS Upon Terrestrial Radio, Table 1.3 (filed Sept. 15, 1995), included as Appendix A to Primosphere and AMRC Comments.

[60] Dr. Larry F. Darby, Economic and Financial Aspects of U.S. Commercial Radio Broadcasting, at 20 n.25 (filed Sept. 15, 1995) ("Darby Appendix"), included in DSBC Comments.

[61] Donna Petrozzello, "Radio Stocks Flourish in First Half," *Broadcasting and Cable,* July 10, 1995 at 35.

results will be even better;[62] satellite DARS providers will have to *spend* around a half-billion dollars each just to reach the market. Conventional radio long has been connected with the pulse of its local community; satellite DARS will have to concentrate on nationwide services, without local news, traffic, weather or sports. Virtually every automobile has a conventional radio; satellite DARS listeners will have to purchase a new radio, plus subscription fees, just to get the signal. The importance of this market disadvantage is recognized by one of NAB's own experts:

> Consumers would have to purchase the receiver and the programming from DARS distributors or retail outlets, and would use it in addition to their local radio stations. Consumers would still have to obtain local news and information, traffic, weather reports from other sources such as local radio. This scenario would limit the compatibility of the DARS system for use in vehicles as a separate audio system. Connecting the DARS unit to a car audio system may be a limiting factor for many consumers who may perceive the installation as an unwanted hassle.[63]

NAB's expert makes it seem as if DARS is in need of economic protection from the mighty terrestrial radio, not the other way around.

So why is NAB denigrating its own industry? The answer is simple: when at its trade shows or on Wall Street, NAB touts the strength of its members; when before the

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[62] *See* Advertising Revenue Up Average 8%, *Broadcasting & Cable* at 38 (Oct. 9, 1995) (Radio Advertising Bureau reports radio stations experienced a 10% average revenue growth during the first eight months of 1995 over 1994 figures and RAB President Gary Fries says such "increases should persist through the fourth quarter").

[63] NAB at 6, Attachment 7 at 15.

Commission, radio is the sad-sack stepchild of communications, poised to disappear absent governmental intervention. With satellite DARS as its bogeyman, the broadcasters hope to gain concessions and privileges that they cannot win on the merits. This is little more than a cynical play for a broadcaster entitlement that would come at the expense of the listening public.

And what about NAB's consultants that predict when the sky will fall and how fast it will plummet? These hired guns are no better. As seen below, their findings are irrelevant, flawed and -- most amusingly -- contradicted by NAB's own in-house and external experts.

2. NAB's Studies Are Flawed

The problems with NAB's studies are legion. Devoid of scientific method, the studies rely largely on anecdotal testimony to attempt to establish what purports to be a quantitative point. They deserve little credence, for numerous reasons.

First, NAB's comments and attached studies prove too much. Their central contention is that radio is a beleaguered service, already laboring under an excess of competition from its own kind in the form of Docket 80-90 drop-ins. The broadcasters offer a superficially plausible set of numbers that purports to show radio on the ropes. This analysis, however, begs the question: if the radio business really is so fragile, where are the stations that go dark? Why is there so little evidence that radio really is in trouble? The answer is that radio is highly flexible and adaptable: if adult contemporary fails in the market, switch to '70s oldies; if Rush Limbaugh does not draw sufficient audience, broadcast

Mario Cuomo. In fact, not only have the numbers of stations in the market been growing, but the revenue per station has risen as well. Consistent with common sense observation of the world -- NAB's claims to the contrary notwithstanding -- terrestrial radio broadcasters will not become members of an endangered species.

In this regard, Dr. John Peterman of Law & Economics Consulting Group, Inc. analyzed the contentions of NAB and its experts on behalf of CD Radio.[64] As part of this analysis, he evaluated radio station viability as a function of audience size. Considering a broad sample of markets he found that in the vast majority of cases reducing station audiences by 10% would leave the affected stations with audiences equal to or greater than those of comparable stations. Indeed, all of the reviewed stations in small markets continue to reach audiences that are equal to or larger than the audiences reached by existing stations in similarly sized markets even after their audiences are reduced by 10%.[65]

Second, NAB and its broadcaster members are internally contradictory. In some places, they claim that satellite DARS is an unwanted, unneeded service,[66] yet they inconsistently argue that satellite DARS will be so successful that it will destroy conventional radio as we know it.[67] As CD Radio noted nearly three years ago,[68] neither is true: there

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[64] Peterman's analysis is attached as Appendix A.

[65] Peterman at 18.

[66] *See, e.g., id.* at 16-19.

[67] NAB at 24, Attachment 5.

[68] *See* Opposition to Petitions to Deny and Response to Comments (filed Dec. 1, 1992); Reply of CD Radio (filed Mar. 1, 1993).

is an established public interest in DARS via satellite that can be highly profitable even at low penetration rates, and satellite DARS serves unmet needs that will largely complement -- not compete with -- traditional broadcast radio, as one of NAB's experts acknowledges.[69] When this occurs, the pie gets bigger: satellite DARS actually will increase total radio listenership.[70] Indeed, NAB's own survey of consumers found that the vast majority of respondents, even when asked to assume that they had Satellite DARS, would not listen to traditional radio less. As Peterman notes, "[b]y implication for most respondents any satellite DARS listening would be additional listening due to the added choice and other benefits of satellite DARS."[71]

Third, the NAB studies are inconsistent with other studies *including some authored by NAB's own consultants.* Kagan Associates, for example, submits a gloom and doom appendix claiming that radio already has been devastated by the Docket 80-90 drop-ins, causing serious reductions in cash flow, including negative cash flow in smaller markets.[72]

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[69] NAB Attachment 7 at 15.

[70] *See* NAB at 14 (citing Haring and Shooshan, Local Perspectives on Localism in Broadcasting and the Adverse Impact of Satellite DARS at 115 (Sept. 12, 1995) *included as* Attachment 1 to NAB Comments ("H&S") (quoting Ken Niles, General Sales Manager, KFO) (competition in small markets includes "cable TV, satellite TV, direct TV, laser disc TV. People also have their CD players and their cassette players."); *see also* Reply of the National Association of Broadcasters at 8 (filed Mar. 1, 1993) (rural or remote listeners requiring "ubiquitous availability of radio service" -- an important potential market for satellite DARS -- currently utilize "the alternatives of taped cassettes and compact discs" and not broadcast radio).

[71] Peterman at 12.

[72] NAB Attachment 6 at 20 (claiming that small market stations have a -121.8 percent cash flow as the result of Docket 80-90 drop-ins).

Kagan also issues an annual summary analyzing radio station deals and trends from the previous year. This year's Kagan report found that cash flow margins in radio "are some of the highest in any media"[73] and that small market stations' margins "more than doubled" (to 17 percent) in the past four years.[74] Obviously, Kagan's more dispassionate data show radio in no need of governmental protection.

In its NAB-sponsored study, Kagan also predicts the imminent onset of the apocalypse if the FCC authorizes satellite DARS: as much as a 10 percent decline in cash flow.[75] Again, when speaking to a larger audience, Kagan comes to very different results:

> [Radio] has more than weathered the rise of several other communications and entertainment fields, notably motion pictures, TV and cable. And the airwaves appear as robust as ever in this new era of satellite and interactive.[76]

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[73] *Kagan's Radio Deal Record 1995* at 5.

[74] *Id.*

[75] NAB Attachment 9 at 20.

[76] *Kagan's Radio Deal Record 1995* at 1.

Kagan's statement is, of course, echoed by that of the President of NAB, quoted above.[77] Given its paper trail of breathtaking inconsistency, Kagan's conclusions in this docket are suspect to say the least, and the Commission should wholly disregard his findings.[78]

Fourth, even if the contradiction is overlooked, NAB's argument compares apples to oranges. For example, there is no reason to believe, as Kagan claims, that the effect of licensing satellite DARS would be similar to the addition of new drop-in FM stations.[79] The Docket 80-90 drop-ins were, by definition, local stations that mostly served targeted community needs. As a national service, satellite DARS simply cannot meet this demand. Moreover, satellite DARS services will be purchased as a bundle of services. The experience with cable radio and other record evidence (even NAB's own consumer survey) suggests that the vast majority of traditional radio listeners will not purchase satellite DARS

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[77] The Veronis Suhler report similarly concludes that the Docket 80-90 drop-ins did not harm radio: "Over the 1975-1992 period, radio's share of measured media advertising showed surprisingly little fluctuation; its share varied by less than a percentage point -- 10.0 percent to 10.9 percent." The Veronis, Suhler & Associates Communications Industry Forecast/Radio Broadcasting (July 1995) at 125. This does not sound like an industry that needs to be read its last rites.

[78] Kagan's analysis also is faulty because it is based on two wholly unrealistic assumptions. First, it assumes that a reduction in audiences would not increase local advertising rates. Second, it assumes that stations could not adjust their costs to adopt to changes in audience size. Neither assumption is sound. Peterman at 25. Peterman demonstrates that local advertising rates would likely rise, diminishing the effect of any audience loss on station revenues. Net revenues could even rise, reversing the Kagan results. Peterman at 8-10, 23. Peterman also shows that Kagan's assumption regarding fixed costs is unrealistic and inconsistent with the wide range of audiences reached by different stations over long periods of time. Peterman at 24, 19-21.

[79] *See, e.g.*, NAB Attachment 9 at 20-21.

receivers.[80] Using local market drop-ins to predict the effect of satellite DARS on local programming is like blaming a decline in boat sales on the proliferation of the automobile: the two have nothing to do with each other because satellite radio cannot substitute for local terrestrial radio.

Fifth, NAB artificially "cooks the books" by choosing 1991 numbers. The broadcasters claim -- falsely -- that this is the last year for which data are available.[81] But 1991 was the trough of this country's worst recession in a decade, as Kagan elsewhere concedes.[82] Radio has since bounced back, which NAB itself admits.[83] Thus, NAB's figures prove, at most, that in a significant recession, radio profits were off. So were those of department stores, paper mills, and Washington law firms, but none of them received governmental shelter from competition. Radio neither deserves nor requires such an entitlement here.

Sixth, the NAB's central quantitative syllogism is off base. Many of NAB's studies attempt to predict the effect of (1) an 11.6 percent loss in audience as a result of the advent

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[80] Peterman at 10-15.

[81] NAB at 32, Attachment 13 at 1. More recent data, however, are widely available. The Commission has every reason to be suspicious of this omission and -- if it attempts to predict the effect of satellite DARS on local radio at all (which it should not) -- should require NAB to provide more recent numbers, as CD Radio itself has proffered. And, as noted above, this more recent data presents a much different picture of the American radio business.

[82] *Kagan's Radio Deal Record 1995* at 3 ("By 1991, a sluggish economy knocked the wind out of ad spending."). *See also* Darby Appendix at 4 n.2.

[83] *See* NAB at 36 ("[T]he radio industry in large markets overall has experienced strong recent growth in revenues. . .").

of satellite DARS. NAB concludes that this will lead to (2) an 11.6 percent decline in revenues as well. Ultimately, and unsurprisingly, the NAB consultants find that this, in turn, will lead to (3) a massive decline in conventional broadcasting profitability and, thus, (4) reductions in local programming. Simply put, *every step in this argument is flawed:*

- *Traditional Radio Audience Share Will Not Decline 11.6 Percent.* NAB derives its estimate of an 11.6 percent audience share reduction through an internal consumer survey that purportedly showed that about 48 percent of the population would listen to satellite DARS.[84] NAB's study, however, neglected to mention the critical fact that a consumer desiring DARS will be required to purchase a new radio, an approximately $300 up-front cost that will likely depress demand. If the survey had taken that into account, the 11.6 percent figure would be much lower.

  Moreover, the NAB's own survey demonstrated how price sensitive the market is: if satellite DARS is not free but is $5 per month, the consumer interest drops to 28 percent.[85] With this sharp elasticity of demand, imagine the further drop in audience were the price to be $10 per month, as CD Radio plans to charge.[86]

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[84] NAB Attachment 5 at 5.

[85] NAB Attachment 5 at 5.

[86] Indeed, Peterman calculates that if a new satellite DARS receiver cost $300, the full monthly cost of CD Radio's service will be approximately $15 per month over the first five years. He concludes:

> Given the sharp drop in the proportion of "interested" or "very interested" respondents when a $5/month fee is imposed, these added costs could have a pronounced effect in reducing the "interested" and particularly the "very interested" groups -- and of course on actual purchases.

Peterman at 11.

Peterman also shows that NAB's own survey results can be used to underscore the conservative nature of Lilley study's estimate of the decline in traditional radio revenues due

- *Traditional Radio Revenues Will Not Decline 11.6 Percent:* Perhaps NAB's most fallacious assumption is their claimed relationship between a drop in audience share and loss of advertising revenues. In the *Lilley* study, CD Radio showed that the historical experience in broadcast television was that the drop in audience share as a result of diversion to pay TV in the late 1970s through early 1980s did not cause an equivalent drop in advertising revenue.[87] NAB, however, concludes that audience reductions translate to revenue reductions on a 1:1 basis. No data are cited to justify this result; NAB's sole support for this critical figure is an alleged "accepted rule of thumb."[88] No such rule exists, and NAB does not -- and cannot -- support it.[89]

- *Broadcaster Profits Will Not Vanish:* NAB's conclusions about a decline in broadcaster profits as a result of satellite DARS suffer numerous flaws. First, as noted above, it relies on 1991 figures, a recession year throughout America. Second, the same Kagan report already concludes (falsely, in CD Radio's view) that many stations are unprofitable, making it hard to judge the source of any hypothetical future broadcaster lost profits. Finally, as noted in earlier filings, for smaller stations, radio "profits" are likely a meaningless term, because the owner-general manager's salary is how money is extracted from the business.

- *Local Programming Will Not Disappear:* Another unsupported assertion is that, should local radio stations be required to cut costs, the first thing to go is local

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to satellite DARS. Adjusting that study's results to elect the finding of the NAB survey that satellite DARS listeners continue to listen to traditional radio reduces Lilley's estimated worst case revenue decline from 3.1% to 1.8%. Peterman at 12-13.

[87] *See* Lilley study at 6 (showing that when an 8 percent share of broadcast TV audience was diverted to pay cable, broadcast TV advertising dropped only 1.5 points).

[88] NAB at 27. NAB does acknowledge that CD Radio has shown otherwise, *see* NAB at 27 n.65 (citing the Lilley study).

[89] Indeed, elementary economic theory dictates that a reduction in traditional radio listeners actually will cause local advertising rates to rise. As Peterman explains the extent to which rates rise will depend on the elasticity of demand of local radio advertisers and on how the marginal cost of supplying listeners changes with changes in output. He notes that because many local advertisers may not view newspapers and other local media as close substitutes for radio, a reduction in the number of traditional radio listeners could lead to a proportionately greater price increase per listener reached and greater revenues. Peterman at 8.

service.[90] Nonsense. Local programming is cheap and easy. Local talk radio is one of the fastest growing radio formats today; it is also one of the least expensive: all a radio station needs is a studio and a few phone lines.

Moreover, local programming in small markets is and remains popular even though they do not have the same audiences as stations in large markets.[91] Coverage of local sports, to use one of NAB's examples, wins audience and represents radio's comparative strength over other media.[92] This will be all the more true when satellite DARS arrives. Indeed, the advent of satellite DARS systems serving national audiences will likely cause radio to *increase* its

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[90] *See* NAB at 38. Peterman points out that NAB and its experts fail to show why local programming becomes less profitable with a decline in traditional audiences. Of Haring and Shooshan's interviews he says:

> The evidence is anecdotal. It does not estimate the likely extent of reductions in local programming, the magnitude of the audience diversion on which any reductions are based, or why local programs become less profitable than non-local alternatives. It is also not noted, if one station is assumed to decrease its local programming, what incentives would exist for the other stations to increase their local programming.
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> * * * *
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> On the whole, from both theoretical and empirical perspectives, NAB has not shown that the entry of SDARS would decrease local programming significantly if at all.

Peterman at 17-18.

[91] NAB's own Crystal Radio Award Finalists, submitted in its comments as evidence of allegedly threatened localism, actually provides evidence of the robust condition of local radio programming even in the smallest markets. A full one third of the finalists in 1995 are radio stations in the smallest markets -- rankings 151-261. Since these markets comprise about 30% of all stations and 8% of the population this evidence does not support NAB's hypothesis that stations reaching smaller audiences will provide less local programming. Peterman at 15. Rather, local, community-based programming not only exists in small markets, but is being produced at an award-winning level of quality.

[92] *See* H&S at 125 ("The games are popular and we can get sponsorship.") (quoting Ken Niles, General Sales Manager, KFO, Hanford-Colinga).

local programming, in order to strengthen audiences that satellite DARS cannot reach, to the benefit of local communities.[93]

Finally, NAB's most important attachment is not even a quantitative study at all. NAB admits that its Haring and Shooshan Report did "not attempt[] to analyze the market potential and likely technology diffusion rate for DARS, which they believe to be speculative

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[93] Even NAB's own Haring and Shooshan Report makes the case that traditional radio will always be the preeminent source of local information and the advertising market of choice for local advertisers. For example, Haring and Shooshan interviewed people in Kelso/Longview, Washington, a small community "under the Portland umbrella." Haring and Shooshan Report (H&S) (quoting Steve Hanson, General Manager of KLOG/KUKN, Kelso/Longview, Washington). The stations in Kelso/Longview manage to compete with at least 14 non-local radio stations using a strong focus on local programming and local advertising. H&S at 96, 103. The emphasis on local programming is effective because it satisfies the demands of both local residents and local merchants.

First, Kelso/Longview residents want to hear local news, city council decisions, community and public service announcements about churches and civic groups, police and fire department safety issues and all the "down-to-earth, nitty-gritty things that people are really interested in." H&S at 98, 102, 103 (quoting Ed Irby, City Manager of Longview & Cheryl Spencer, Executive Director of the Chamber of Commerce). Second, Kelso/Longview merchants say they seek out and "depend" on local stations for advertising because of its affordability, convenience, and immediacy. H&S at 102, 104, 110.

The lessons of the Kelso/Longview market are echoed in Haring and Shooshan's study of Morgan City, Louisiana. Morgan City is a small community relatively adjacent to a metropolitan center -- New Orleans. Morgan City station KQKI-FM counters the effects of 23 non-local radio signals through local programming such as news, health fairs and candidate forums which the "audience loves." H&S at 53 (quoting Paul Cooke, Owner/General Manager, KQKI-FM). Morgan City residents want to hear local advertising in addition to local programming. As one community leader observed "I, as a consumer, want to know who's having the best sales as far as my needs are concerned." H&S at 55 (quoting Emile Babin, Executive Director, East St. Mary Chamber of Commerce).

Merchants in Morgan City, Louisiana apparently recognize the ability of local radio stations to connect with local audiences. *See id.* The relationship between local advertisers, local consumers and local radio stations is so integral that local station owners concede that satellite DARS is "not going to compete with us for local dollars." H&S at 57 (quoting Cooke).

and uncertain."[94] But that is the central focus of this issue: without predicting the likely penetration of satellite DARS, conclusions about competition to traditional radio are entirely conjecture.

Haring and Shooshan compound their error by providing fluff rather than facts. Instead of calculations and figures, the report consists principally of interviews with radio executives in various local markets.[95] These respondents, of course, say that satellite DARS will injure them. But how probative is their testimony? No business wants competition. Indeed, the responses of radio station employees inherently lack any sort of disinterested authenticity.[96] The Commission's mission to ensure the public interest includes the protection of "competition, not competitors,"[97] and the real issue is the benefits satellite DARS provides the listening public. The government should not permit a Washington pressure group to preach from a perch of its own self interest merely because its members are afraid to compete in the marketplace.

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[94] NAB at 22.

[95] The Haring and Shooshan Report does contain in addition a biased history of the localism doctrine. Their discussion somehow omits the Court of Appeals' wise determination in *NAB v. FCC,* 740 F.2d 1190 (D.C. Cir. 1984), that the doctrine of localism gave broadcasters no protection from new technologies offering nationwide services that might siphon some audience share.

[96] In the same vein, the Commission should give no weight to the flock of virtually identical letters filed in this docket by broadcasters opposing licensing satellite DARS. Those letters were obviously drafted on "N" street (or "I" street) and -- in any case -- have no more independent credibility than the Haring Shooshan interviews.

[97] *NPRM,* ¶ 11.

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In sum, the NAB's unfounded hysteria is unsupported by concrete facts on the record. Rather, the broadcasters are squawking like chickens that hear a *rumor* of a fox. But, today's radio business is no weakling: it is financially strong and agile, and capable of withstanding competition from any source. And, with the burden of proof on those that would oppose a new technology or service,[98] the Commission requires more than merely conjecture to stop a valuable new offering. Because satellite DARS would provide ample public interest benefits, and would have minimal impact on terrestrial radio, the Commission should finalize its service rules and license all qualified applicants.

III. THE COMMISSION SHOULD REJECT THE BAND PLAN PROPOSALS OF NAB AND CRACKER AS UNSUPPORTED AND AT ODDS WITH THE SUCCESS OF SATELLITE DARS

In the *NPRM*, the Commission sought comment on matters central to the success of satellite DARS. In particular, the FCC requested "comment on the minimum number of channels necessary to provide effective and economically viable nationwide DARS service and on how much spectrum is necessary to support this minimum number of channels."[99] In its opening comments, CD Radio demonstrated that licensees must have sufficient bandwidth to carry 30-40 CD-quality channels if satellite DARS is to be economically

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[98] 47 U.S.C. § 157; *see NPRM*, ¶ 11.

[99] NPRM, ¶ 31.

viable.[100] Supporting this need, CD Radio has shown, requires 12.5 MHz for each licensee.[101] Because the entire 50 MHz allocation to satellite DARS is available for licensing, it follows that the band can accommodate four satellite DARS operators.[102] The record developed in the initial comments supports this conclusion.[103]

Only two commenters, NAB and Cracker Barrel Old Country Store, Inc. ("Cracker"), proposed alternative band plans. Neither organization has any experience in satellite radio. Their proposals are not only unsupported by the analysis called for in the *NPRM*, they are obvious attempts to derail the rapid implementation of satellite DARS to serve these commenters' ulterior motives: in NAB's case, delaying and undermining DARS, and in Cracker's case, reopening the filing window. As amplified below, neither band plan merits serious consideration. Rather, the FCC should proceed to license the band in four 12.5 MHz segments.

A. NAB's Band Plans Would Fail to Support Viable Satellite DARS Systems

Central to each of NAB's two alternate band plan proposals is licensing in 5 MHz blocks. Rather than analyzing how many nationwide channels would be necessary for a

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[100] CD Radio at 8-11.

[101] *See id.* Appendix B, at 9.

[102] *Id.* at 16-18.

[103] DSBC at 35-36, Comments of American Mobile Radio Corporation at 2 ("AMRC"); Primosphere at 17; Joint Comments of the DARS Applicants at 2 ("Joint Comments").

DARS system's economic viability and how much spectrum would be required to support those channels, NAB simply assumes 5 MHz is sufficient. Indeed, given NAB's consistent opposition to DARS, CD Radio suspects that NAB chose the figure precisely because it would *not* lead to viable systems. Looking for some justification for its desire to shuffle the band plan and slow the implementation of DARS by CD Radio, NAB has scoured the record for references to bandwidths of approximately 5 MHz or less.[104] Although NAB found a few references that superficially lend support to its 5 MHz block proposal, these sources do not, in fact, sustain NAB's position.

NAB's surgical extractions from the initial applications of AMRC and Primosphere ignore the fact that, in these system designs, 5 MHz and 4 MHz bandwidths would support only 15 and 4 CD quality channels, respectively. In each case, from a system perspective, these applicants originally proposed more than 5 MHz (AMRC, 10 MHz; and Primosphere, 24 MHz).[105]

NAB also references the proposal of the ATV Grand Alliance to offer 32 *terrestrial* CD-quality channels in 6 MHz. As CD Radio explained in its opening comments, terrestrial transmission presents a totally different picture than satellite DARS in terms of achievable

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[104] NAB at 60 n.140.

[105] See American Mobile Radio Corp. Application at 7, File Nos. 26/27-DSS-LA-93 and 10/11-DSS-P-93 (filed on Dec. 15, 1992); Primosphere Application, Appendix 1: Technical Showing at 2, File Nos. 29/30-DSS-LA-93 and 16/17-DSS-P-93 (filed Dec. 15, 1992).

transmitter powers, service to mobile subscribers and radius of operation, preventing any meaningful comparison of channels per MHz between the two types of systems.[106]

Moreover, NAB ignores the fact that the DARS applicants agreed to share the spectrum with 12.5 MHz each. Given that the current four applications are the *only* serious proposals before the FCC and reflect a deep, long-term commitment of resources, there is simply no support for allocating less spectrum per licensee.[107] Because larger bandwidth permits more counterprogramming and four licensees is sufficient to assure intra-service competition, the FCC need not strain to find justification for additional licenses. In short, to ensure that DARS licensees will have sufficient spectrum for the number of channels to be economically viable, the FCC should license four DARS systems of 12.5 MHz each. Otherwise, the promise of benefits that DARS could bring to the American public would likely remain unrealized. While this may satisfy NAB, it would contravene the public interest obligations of the Commission.

B. Cracker's Ambiguous Regional Beam Plan Would Diminish Diversity and Competition and Adversely Affect Local Broadcasters

Cracker's plan is similarly defective. Cracker, cognizant that it ignored the opportunity to apply for a satellite DARS license three years ago, belatedly seeks permission

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[106] *See* CD Radio Appendix B at 8-9.

[107] NAB also cites the December 1992 application of Loral Aerospace Holdings to provide 32 channels of CD-quality audio in 6 MHz. However, before comments and petitions were due on this application, Loral abandoned it, recognizing the merits of CD Radio's band plan.

to participate in the current round of processing. In support of its untimely efforts, Cracker purports to demonstrate that the 2310-2360 MHz band can accommodate more than the four existing satellite DARS applicants. Cracker's plan pivots on its contention that, by using code division multiple access ("CDMA"), the total number of nationwide CD-quality channels that can be accommodated in the band is 465.[108] Cracker concludes that, because licensees will need at least 30 channels for viability, then as many as 15 licensees could be supported within the band.[109]

Cracker's position is entirely unsupported (as best can be determined from its wafer thin discussion) and wholly specious. Despite the engagement of a satellite engineering firm to assess practical channel availability within the 2310-2360 MHz band,[110] Cracker fails to provide any technical basis for the assertion that, through CDMA, the band can support 465 channels.[111] With *no* technical supporting material, *no* application, and *no* engineering,

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[108] Comments of Cracker Barrel Old Country Store, Inc. at 9 ("Cracker").

[109] *Id.* at 11.

[110] *Id.* at 9.

[111] Cracker's suggestion that its Figure 1 shows that "approximately 465 compact disc-quality 128 kbps channels can be accommodated in the 50 MHz allocated to DARS" is intellectually dishonest. Rather, the chart assumes *a priori* that exactly 465 such channels -- the large majority of which are apparently *not* nationwide, as shown below -- can be accommodated. Otherwise, Cracker's Figure 1 is simply an arithmetical display of its unsupported allegation of the total number of channels (Y) that can be derived in the 2310-2360 MHz band making two assumptions: (i) 465 128 kbps channels can be accommodated in the band, and (ii) a certain number of the 128 kbps channels (X) will be converted to a larger number of channels using a lower data rate (Z) (*e.g.*, 9.6, 28.8 or 64 kbps).

$$Y = 465 - X + X(128/Z)$$

Cracker proposes that the Commission -- and the public -- buy a pig in a poke. The Commission should afford Cracker no credence.

Taking what few technical details are provided, it appears that Cracker is claiming -- without support -- that CDMA is some sort of "magic bullet" that permits satellite DARS providers to obtain enormously greater capacity out of a given allocation. This simply is not so. Because there "is no such thing as a free lunch," CDMA and TDMA permit about the same number of nationwide channels in a given bandwidth. Licensees should be free to use whatever sort of technology they believe will best serve the public and their business plan, but the Commission should not be fooled that merely by requiring CDMA, greater entry would be feasible in the 2310-2360 MHz allocation.

Indeed, in support of its plan, Cracker touts numerous erroneous assertions and assumptions, and just plain misstates the truth.[112] For example, Cracker does not disclose

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CD Radio acknowledged in its comments that some satellite DARS providers may choose to use a lower data rate to provide less-than-CD quality programming on some channels. CD Radio at 93. Cracker's Figure 1 merely shows, as an arithmetical matter, assuming its starting point of 465 CD quality channels -- without any regard for the coverage area -- how many lower-data rate channels could be derived by such decisions. Because Cracker appears to rely on 10 regional beams, the number of channels actually available to any single listener would be as few as 10% of the figures given. In any event, as CD Radio has explained on earlier occasions, the FCC should rely on the competitive market to determine the proper mix of data rates in a satellite DARS system. *Id.*

[112] For example, Cracker parades numbers such as 3,000 channels, Cracker at 9, but they are *data or voice grade* (indeed, low voice grade) channels, not high-quality audio channels. Cracker's claim to have discovered the secret of transmutation in the band thus appears to be predicated on reducing the quality of programming provided to the listening public. This approach would be consistent with its apparent plan to use satellite DARS as a sort of travelers advisory service alerting listeners to the location of Cracker's nearest restaurant. *See id.* at 3. Elsewhere, Cracker concurs that a 128 kbps encoding rate is

the nature of its supposed 465 channels. The sole hint comes in a footnote, where Cracker has hidden the only sentence that describes its allegedly planned system. There, it mentions "ten regional beams."[113] It appears, therefore, that the 465 channels are the total of regional channels that could be provided throughout the nation by systems that use spot beams to direct signals to sub-CONUS regions.

As CD Radio has explained before, although satellite DARS systems can be designed with such a configuration -- DSBC's has done so -- they do not deliver all those channels to any given point in the United States. Rather, under this approach, different beams -- and channels -- are available in different regions. What Cracker proposes, therefore, is geographically to fragment and localize markets and provide *fewer* channels to any given subscriber than a TDMA design.[114] In sharp contrast, CD Radio demonstrated in its comments that approximately 30-40 CD quality channels could be provided by *each* of four licensees.[115]

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appropriate for high quality audio channels, but engages in similar alchemy by asserting that such channels can be multiplexed at "30 channels per MHz." *Id.* at 10 n.11. Even without error correction or overhead, no explanation is provided on how 30 such nationwide coverage channels could be provided practically in 1 MHz on a mobile satellite system.

[113] *Id.* at 9 n.10.

[114] It appears that, as a matter of nationwide coverage, Cracker envisions the equivalent of about 46 nationwide channels in the entire band (465 channels divided by 10 regional channels for national coverage).

[115] CD Radio Appendix B at 14-16. Moreover, there is no evidence that Cracker has accounted for forward error correction and other techniques to overcome multipath fading present in a mobile environment. If not, then under Cracker's regional coverage proposal, listeners would each have access to fewer than 23 CD quality channels from the entire 50 MHz band, a paltry amount considering that more channels will be available from a single

Adoption of Cracker's approach would thus have only the following results. First, diversity in every area of the country would be far less under Cracker's regional scheme, causing DARS to fall far short of its potential. Second, extensive use of regional spot beams would eliminate the promise of satellite DARS to support unique niche programming that requires the aggregation of listeners nationwide.[116] Third, the emphasis on regional spot beams localizes DARS and accentuates any impact satellite DARS could have on local broadcasters. Through the use of regional beams, programming and advertising will be steered towards populations in smaller geographic areas providing more of a threat to traditional radio's local advertising, its primary source of revenue.[117] If DARS is a nationwide service, however (as CD Radio has consistently supported), the impact on local

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licensee in 12.5 MHz pursuant to the proposals of the pending DARS applicants.

[116] Indeed, the historical promise of satellite services has been their nationwide scope and ubiquity. See, e.g. All Pro Sports and Entertainment, Inc. at 1 (satellite DARS will enable the presentation of niche programming not economically supportable with local market size limitations); American Council for the Arts at 1 (satellite DARS will create new and larger audiences for symphonies, operas, other cultural institutions and less well-known artists); Consumer Electronics Group of the Electronic Industries Association at 1 (satellite DARS will make niche programming more economically viable); Council for the National Interest at 1 (satellite DARS would be able to aggregate scattered populations of non-English speaking audiences); Dialog and Confluence at 1 (same); National Asian American Telecommunications Association at 1 (same); Korean American TV of Washington at 1 (same); KJAZZ Satellite Radio at 1 (satellite DARS could aggregate the national audience for jazz music in order to make a jazz channel viable); see also NAB at 43 (acknowledging satellite DARS' ability to use aggregation of national audiences in order to present niche programming); Fiesta Italiana at 1 (satellite DARS would be a good vehicle to provide Italian-American programming to the twenty-five million Italian-Americans in the U.S.); Italian Industries Association at 1 (same).

[117] Cracker strongly suggests that this is its intent. *See* Cracker at 3.

broadcasters will be virtually nonexistent.[118] Fourth, and finally, Cracker's plan actually proposes to reduce competition in any given market.

In sum, Cracker's proposal may accommodate that company's private interest, but it does not serve the public interest. The Commission should not be deterred by Cracker's untimely plan, and it should be rejected.

IV. THE FEW COMMENTERS ADVOCATING RE-OPENING OF THE CUT-OFF UTTERLY HAVE FAILED TO JUSTIFY SUCH UNLAWFUL ACTION

While a diverse majority of commenters joined CD Radio in opposing the re-opening of the satellite DARS cut-off as both unlawful and poor public policy,[119] the few parties -- broadcasters and a restaurant chain -- that asked the FCC to abrogate the cut-off offered little justification for doing so.[120] Indeed, the leading proponents of reaching back three years in time to invalidate the cut-off -- NAB and Cracker -- would have the Commission cast a blind eye on the FCC precedent that constrains such action, the overwhelming equities weighing in favor of CD Radio, and the delay of satellite DARS service to the public that would result from setting aside the cut-off period.

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[118] *See supra* at pp. 18-19.

[119] *See, e.g.*, AMRC at 5-11; Citizens at 5-6; DSBC at 35, 42-47; Primosphere at 8-10; Comments of Satellite Broadcasting Communications Association of America at 8 ("SBCA"); Comments of Robert T. Wertime at 2, 4-5 ("Wertime").

[120] *See* NAB at 56-59; Cracker at 3-7. *See also* Comments of Minority Media and Telecommunications Council ("Minority Media") at 2-3. While not expressly advocating re-opening of the cut-off, Minority Media urges the FCC to start the licensing process again to increase the involvement of minorities.